



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/609,921	07/03/2000	William Patrick Flanagan	RD-27,270/USA	4350

7590 04/23/2003

DOUGHERTY, CLEMENTS & HOFER
1901 ROXBOROUGH ROAD
SUITE 300
CHARLOTTE, NC 28211

EXAMINER

SINES, BRIAN J

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED: 04/23/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/609,921

Applicant(s)

FLANAGAN ET AL.

Examiner

Brian J. Sines

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/3/2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-15, 17-29 and 31-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-15, 17-29 and 31-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21 – 29 and 31 – 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 21 and 33, the preambles of these claims state that the method is directed to a method for the rapid screening of potential reactants, catalysis and reaction conditions. However, these claims do not recite a screening step. The instant claims should recite what steps are involved in the rapid screening of the potential reactants, catalysis and reaction conditions. What screening techniques are employed in the method?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 4, 6 – 15 and 17 – 20 are rejected under 35 U.S.C. 102(b) as being anticipated by DeWitt et al. (U.S. Pat. No. 5,714,127 A). Regarding claims 1 and 14, As shown in figure 4, DeWitt et al. teach an apparatus comprising: a reaction substrate (reservoir block, 15) comprising at least one substrate reservoir (reaction well, 16); and

Art Unit: 1743

a head plate (manifold, 20) positioned to provide a sealed pressurized headspace adjacent to the substrate reservoir. Regarding claims 2 and 14, DeWitt et al. teach that the reservoir block (15) and the manifold (20) may each be operated at different temperatures (see col. 13, lines 52 – 61). Dewitt et al. teach that the headspace of the manifold has an adjustable pressure in order to control the gas flow through pressurization (see col. 9, lines 61 – 67; col. 10, lines 1 – 14; figures 3 & 4). Regarding claims 2 and 3, DeWitt et al. anticipate the incorporation of a controller or computer for controlling temperature (see col. 15, lines 1 – 32; col. 16, lines 29 – 56; col. 20, lines 18 – 36; col. 87, lines 13 – 28). Regarding claims 4 and 15, DeWitt et al. teach that the gas source includes at least one gas, such as nitrogen or argon (see col. 13, lines 54 – 56; col. 17, lines 21 – 24). Regarding claims 6, 7, 17 and 18, Dewitt et al. teach that ports (23) allow control over the atmosphere within the manifold (20) (see col. 9, lines 61 – 67; col. 10, lines 1 – 6). Regarding claim 8, DeWitt et al. teach that the apparatus may be used with liquid reactant systems (see col. 3, lines 31 – 65; col. 13, lines 16 – 40). Regarding claims 12, 13 and 19, DeWitt et al. teach that gaseous materials or reactants may be employed in the use of the apparatus (see col. 9, lines 50 – 67; col. 10, lines 1 – 6). Regarding claim 14, Dewitt et al. teach the use of temperature control (see col. 20, lines 18 – 30). Regarding claims 8 – 15 and 17 – 20, it should be noted that these claims are directed to an apparatus. Therefore, it is the structural limitations of the apparatus, as recited in the claims, which are considered in determining the patentability of the apparatus. These claims recite various process or use limitations and are accorded no patentable weight to an apparatus. For example, these claims

Art Unit: 1743

recite how the apparatus is to be operated, such as the operating pressure or temperature, or what is intended to be used with the apparatus, such as a specific reactant system and its associated characteristics (e.g., film thickness), which do not impart any limitations to define the structure of the apparatus being claimed. Process limitations do not add patentability to a structure, which is not distinguished from the prior art. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Response to Arguments

Applicant's arguments, filed 2/3/2003, with respect to the rejection(s) of claim(s) 1 – 4, 6 – 15 and 17 – 20 under 35 U.S.C. 102(b) have been fully considered and are not persuasive.

In response to applicant's arguments, the recitation that the apparatus is to be used for the rapid screening of potential reactants, catalysts or reaction conditions has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process

Art Unit: 1743

steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In response to applicant's argument that the apparatus is to be used for the rapid screening of potential reactants, catalysts or reaction conditions, allegedly contrary to that use of the apparatus as taught by DeWitt et al., a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regarding claim 1, the applicant's assert that DeWitt et al. does not disclose an apparatus for the rapid screening of potential reactants, catalysts or reaction conditions at high pressures. Contrary to the applicant's assertions, DeWitt et al. do teach that the disclosed apparatus may be used in a process for screening potential reactants or products. DeWitt et al. teach that samples of the products may be subjected to further product analysis and/or biological testing (see col. 22, lines 1 – 10). The applicant's are advised that the instant claim does not provide any further recitation as to what structure is involved, or how the apparatus is used in screening the products. Although the manner of use of the apparatus, as taught by DeWitt et al., in screening potential

Art Unit: 1743

reactants or products may not be what the applicant's intend, the scope of the instant claim does not exclude the teachings of DeWitt et al.

The applicants assert that DeWitt et al. does not teach an apparatus comprising, in particular, a sealed pressurized headspace. Contrary to the applicant's assertion, as shown in figure 4, DeWitt et al. do teach an apparatus comprising: a reaction substrate (reservoir block, 15) comprising at least one substrate reservoir (reaction well, 16); and a head plate (manifold, 20) positioned to provide a sealed pressurized headspace adjacent to the substrate reservoir. DeWitt et al. teach that the manifold (20) provides an air-tight chamber, which facilitates manipulations common to organic synthesis (see col. 9, lines 50 – 67 & col. 10, lines 1 – 24). Therefore, other than having a plurality of ports (23) for gas circulation, the head plate (manifold, 20) may be construed by one of ordinary skill in the art as providing a sealed headspace, which is isolated from the ambient environment. The gas inlet port (36) of the apparatus disclosed by the applicants is analogous to the ports (23) of the apparatus taught by DeWitt et al. This interpretation is considered to be in agreement with the applicants specification. As shown in figure 1 of the applicant's disclosure, the head plate (10) also includes a gas inlet port (36), which facilitates the introduction of gas into the headspace (12) (see page 6, lines 8 – 22 of the applicant's specification).

The applicants further assert that DeWitt et al. do not teach that the sealed pressurized headspace has an adjustable pressure in a range of between about 1 atmosphere and about 50 atmosphere. Contrary to the applicant's assertions, DeWitt et al. do suggest that the headspace may be pressurized above 1 atmosphere. DeWitt

Art Unit: 1743

et al. do teach that the ports (23) facilitate gas circulation through the manifold (see col. 9, lines 50 – 67 & col. 10, lines 1 – 24). In order for gas circulation to occur, the gas must be pressurized. DeWitt et al. teach that a positive nitrogen gas flow through the manifold is maintained (see col. 29, lines 36 – 67 & col. 30, lines 1 – 14). Therefore, it is inherently anticipated that the pressurized head space would exhibit a gas pressure of at least above 1 atmosphere in order for gas flow to occur through the manifold (20). Regarding claim 1, there is no recitation of materials of construction for the claimed apparatus. The applicant's arguments regarding the material of construction of the apparatus taught by DeWitt et al. are not germane to the issue of patentability, since the instant claim neither excludes or limits the material of construction of the apparatus either taught or suggested by the teachings of DeWitt et al. The apparatus as taught by DeWitt et al. is considered capable of performing in the same manner as the applicants claimed apparatus, i.e., having a pressurized headspace of at least above 1 atmosphere, as discussed above.

Applicants arguments, with respect to the rejection of claims 21 – 29 under 35 U.S.C. 103(a) as being unpatentable over DeWitt et al. (U.S. Pat. No. 5,714,127 A) have been fully considered and are persuasive. The rejection of claims 21 – 29 has been withdrawn.

Allowable Subject Matter

The indicated allowability of claims 30 – 38 in the previous office action is withdrawn.

Claims 21 – 29 and 31 – 38 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

The following is an examiner's statement of reasons for allowance:

The prior art, as exemplified by DeWitt et al. teach that samples of the products synthesized by the disclosed apparatus may be subjected to further product analysis and/or biological testing (see col. 22, lines 1 – 10). However, DeWitt et al. in addition to the cited prior art neither teach or fairly suggest a method for the rapid screening of potential reactants, catalysis and reaction conditions, wherein the method further incorporates the use of a plurality of reactant systems partially embodied in a liquid film and the liquid film having a defined thickness L , which is sufficient to allow a reaction to be independent of the evaporation of the liquid film and the mass transport rate of a gas into the liquid film.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 1743


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines whose telephone number is (703) 305-0401. The examiner can normally be reached on Monday - Friday (11:30 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

BJS
April 17, 2003


Jill Warden
Supervisory Patent Examiner
Technology Center 1700